

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

WSOU INVESTMENTS, LLC, d/b/a
BRAZOS LICENSING AND
DEVELOPMENT,

Plaintiff,

v.

TP-LINK TECHNOLOGY CO., LTD,

Defendant.

CASE NO. 6:20-cv-01022

JURY TRIAL DEMANDED

COMPLAINT

Plaintiff WSOU Investments, LLC d/b/a Brazos Licensing and Development (“Plaintiff” or “Brazos”), by and through its attorneys, files this Complaint for Patent Infringement against defendant TP-LINK Technology Co., Ltd. (“Defendant” or “TP-Link”) and hereby alleges as follows:

I. NATURE OF ACTION

1. This is a civil action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 1 *et seq.*, including §§ 271, 281, 283, 284, and 285. This action is brought to end Defendant’s unauthorized and infringing manufacture, use, sale, offering for sale, and/or importation of methods and products incorporating Brazos’s patented invention.

2. Brazos is the owner of all rights, title, and interest in and to US Patent No. 7,652,988 (the “’988 Patent” or the “Patent”) including all rights to recover for all past and future infringement thereof.

3. Upon information and belief, Defendant has been and currently is infringing, contributing to the infringement of, and/or inducing the infringement of Brazos’s Patent, by,

among other things, making, using, selling, importing, and/or offering for sale, within the territorial boundaries of the United States and the State of Texas, products that are covered by one or more claims of Brazos's Patent and inducing such conduct by others.

4. Defendant manufactures, provides, sells, offers for sale, imports, and/or distributes Infringing Products (as defined herein) and services; and/or induces others to make and use of its Infringing Products and services in an infringing manner; and/or contributes to the making and use of Infringing Products and services by others, including its customers, who directly infringe the Patent.

II. THE PARTIES

5. Plaintiff WSOU Investments, LLC d/b/a Brazos Licensing and Development is a limited liability corporation organized and existing under the laws of Delaware, with its principal place of business at 605 Austin Avenue, Suite 6, Waco, Texas 76701.

6. Upon information and belief, Defendant TP-LINK Technology Co., Ltd. is a corporation organized and existing under the laws of China, with a place of business located at South Building, No. 5 Keyuan Road, Science and Technology Park, Nanshan District, Shenzhen, Peoples Republic of China.

7. TP-LINK Technology Co., Ltd. may be served with process by serving the Texas Secretary of State, James E. Rudder Building, 1019 Brazos Street, Austin, Texas 78701, as its agent for service because it engages in business in Texas but has not designated or maintained a resident agent for service of process in Texas as required by statute. This action arises out of that business.

8. Defendant manufactures and distributes electronics. Defendant, either itself and/or through the activities of its subsidiaries or agents, makes, uses, sells, offers for sale, and/or imports

throughout the United States, including within this District, computer networking products that infringe the Asserted Patent, defined below.

III. JURISDICTION AND VENUE

9. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a). Alternatively, this Court has jurisdiction over Defendant under Fed. R. Civ. P. 4(k)(2) (“Federal Claim Outside State-Court Jurisdiction”).

10. This Court has specific and general personal jurisdiction over TP-Link pursuant to due process and/or the Texas Long Arm Statute, Tex. Civ. Prac. & Rem. Code § 17.042, because (1) TP-Link has committed and continues to commit acts of patent infringement, including acts giving rise to this action, within the State of Texas and this Judicial District; (2) TP-Link has committed and continues to commit acts of patent infringement in the State of Texas, including making, using, offering to sell, and/or selling accused products in Texas, and/or importing accused products into Texas, inducing others to commit acts of patent infringement in Texas, and/or committing at least a portion of any other infringements alleged herein.

11. The Court’s exercise of jurisdiction over TP-Link would not offend traditional notions of fair play and substantial justice because TP-Link has established minimum contacts with the forum. For example, on information and belief, TP-Link has committed acts of infringement in this Judicial District, directly and/or through intermediaries, by, among other things, making, using, offering to sell, selling, and/or importing products and/or services that infringe the Asserted Patent, as alleged herein. TP-Link has purposefully and voluntarily placed infringing products into the stream of commerce by shipping infringing products through established distribution channels into the State of Texas, knowing or expecting that the Infringing Products would be shipped into Texas.

12. Upon information and belief, TP-Link has continuous and systematic business contacts with the State of Texas. TP-Link, directly and/or through affiliates and/or intermediaries, conducts its business extensively throughout the State of Texas, by shipping, importing, manufacturing, distributing, offering for sale, selling, and/or advertising its products and services in the State of Texas and this Judicial District. TP-Link interacts with subsidiaries, distributors, resellers and/or customers who sell the infringing products into Texas, knowing or expecting that these subsidiaries, distributors, resellers and/or customers will then sell the Infringing Products into the State of Texas, either directly or through intermediaries.

13. Venue in the Western District of Texas is proper pursuant to 28 U.S.C. §§ 1391 (c)(3) which provides that “a defendant not resident in the United States may be sued in any judicial district, and the joinder of such a defendant shall be disregarded in determining where the action may be brought with respect to other defendants.”

14. Venue is proper in this Court pursuant to 28 U.S.C. § 1400(b). TP-Link has transacted business in this Judicial District and has committed acts of direct and indirect infringement in this Judicial District by, among other things, importing, offering to sell, and selling products that infringe the Patent.

15. Upon information and belief, TP-Link designs, manufactures, uses, imports into the United States, sells, and/or offers for sale in the United States products that infringe the Asserted Patent, directly and or through intermediaries, as alleged herein. TP-Link markets, sells, and/or offers to sell its products and services, including those accused herein of infringement, to actual and potential customers and end-users located in the State of Texas and in this Judicial District, as alleged herein.

COUNT ONE
INFRINGEMENT OF U.S. PATENT NO. 7,652,988

16. Brazos re-alleges and incorporates by reference the preceding paragraphs 1–15 of this Complaint.

17. On January 26, 2010, the U.S. Patent & Trademark Office duly and legally issued U.S. Patent No. 7,652,988, entitled “Hardware-based rate control for bursty traffic.”

18. Brazos is the owner of all rights, title, and interest in and to the ’988 Patent, including the right to assert all causes of action arising under the ’988 Patent and the right to any remedies for the infringement of the ’988 Patent.

19. For example, claim 1 of the ’988 Patent states:

A method for controlling packet traffic using a hardware-based rate control engine comprising:

establishing a refresh rate that represents a number of credits that are allocated to a credit bucket in a time-slice;

establishing a maximum credit limit that represents the maximum number of credits that can be accumulated in said credit bucket.

establishing a maximum drain rate that represents the maximum number of credits that can be drained from said credit bucket in a single time-slice;

setting said refresh rate, said maximum credit limit, and said maximum drain rate in registers of a hardware-based rate control engine;

allowing credits to accumulate in said credit bucket over multiple time-slices up to a maximum of said maximum credit limit;

allocating credits from the credit bucket to packet traffic that is associated with said credit bucket;

restricting the allocation of credits from said credit bucket in any single time-slice to the maximum drain rate.

characterizing the flow of packet traffic that is associated with said credit bucket; and

changing the maximum credit limit and the maximum drain rate as a set in response to said characterization.

20. TP-Link's Accused Products meet every limitation of claim 1 of the '988 Patent, as well as other claims of the '988 Patent.

21. TP-Link makes, uses, sells, offers for sale, imports, and/or distributes in the United States, including within this Judicial District, networking products such as High-Speed Cable Modems, wireless routers, ADSL, range extenders, routers and switches, and other devices like IP cameras, powerline adapters, print servers, media converters, wireless adapters, power banks, mobile phones, and SMART home technology devices.

22. TP-Link makes, uses, sells, offers for sale, imports, and/or distributes in the United States, including within this Judicial District, products that use features to control packet traffic, including but not limited to TP-Link Archer MR400, AC1200 Wireless Dual Band 4G LTE Router and products that operate in a substantially similar manner (collectively, the "Accused Products").

23. The Accused Products can connect multiple devices at the same time and provides advanced tools for personalized management such as QoS and Guest Network to control the packet traffic.

24. The Accused Product use QoS (Quality of Service) rules to specify prioritization of traffic (e.g., managing bandwidth) which is for controlling packet traffic using a hardware-based rate control engine and minimizes the impact caused when the connection is under heavy load (e.g., burst traffic/ change in flow characteristics).


25. The Accused Product monitors and changes the data rates with the help of features such as QoS etc. When the QoS is not enabled or not in use, the accused product uses standard (e.g., normal operating condition) priority for the real-time application. As an example, a user in standard priority will also be able to access the internet with standard bandwidth. (i.e., refresh rate).

26. TP-Link provides instructions to its users for the Accused Products about how to monitor data usage. Specifically, TP-Link instructs its users as follows:

3. Data Settings

Data Settings is used to monitor the data usage of your router in real-time. You can limit your data usage according to your monthly allowance or total allowance and you will receive a warning if your data usage reaches the specified level. Follow the steps below to monitor your data usage.

1. Visit <http://tplinkmodem.net>, and log in with the password you set for the router.
2. Go to **Advanced > Network > Data Settings** page.



3. Enable **Data Limit** to set total/monthly data allowance and usage alert to prevent data overuse.
4. Enter the allowed amount of total/monthly data in the **Total/Monthly Allowance** field. When data usage exceeds the allowed level, the router will disconnect from the internet and notify you on the **Basic > Network Map** Page.
5. Enter a percentage in the **Usage Alert** field to prevent data overuse. When data usage reaches the alert level, a warning will be shown on the **Basic > Network Map** Page. If you want to want receive the alert on your phone, enter your mobile phone number in the **SMS Alert for Usage** field.
6. Enable **Monthly Data Statistics** to reset data statistics when the next billing cycle starts.
7. Enter the start date of the billing cycle in the **Start Date** field.
8. Click **Save** to save the settings.

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27. TP-Link instructs its users to “personalize” their home network by using QoS to prioritize devices to give faster performance as needed.

Personalize Your Home Network

Archer MR400 provides a wealth of advanced tools for personalized management.

▶ **Parental Controls**

Block inappropriate content and set daily limits for how much time your children spend online with Parental Controls.

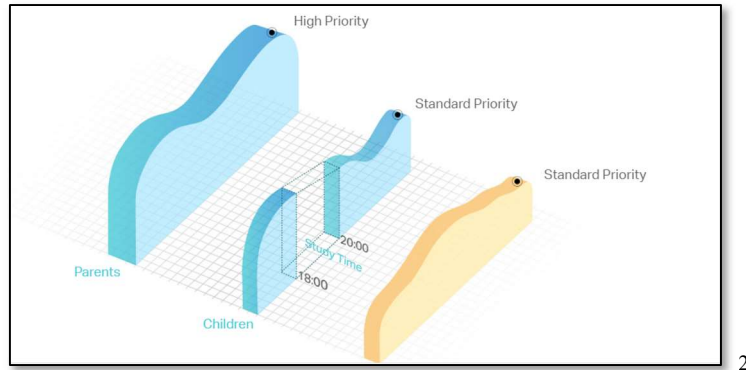
▶ **QoS**

Prioritizes devices to give faster performance where you need it.

▶ **Guest Network**

Guest Network creates a separate Wi-Fi for guests, ensuring your privacy is secure.

¹ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-11-specify-your-network-settings#ug-sub-title-3



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28. The Accused Products comprise establishing a maximum credit limit that represents the maximum number of credits that can be accumulated in a credit bucket.

29. The Accused Products use “Data Settings” to monitor the data usage of the router in a real-time. A user can set the monthly/total data limit to be allocated to the users through the router (i.e., maximum credit limit).

30. For example, a user can select a data limit option and can enter the monthly allowance data value (i.e., maximum credit limit). For example if the data limit is 40 GB per month, the user can access until 40 GB, and after that, the access to internet will be denied.

31. TP-Link provides the following instructions regarding setting up a data limit in the Accused Products:

² <https://www.tp-link.com/en/home-networking/3g-4g-router/archer-mr400/>

Data Settings

Monthly Used: 0.000 MB Correct

You can send messages to your carrier for accurate data usage.

Data Limit: ☒

The router will automatically disconnect from the network when the data usage limit is reached.

Monthly Allowance: MB

Usage Alert: 90 %

SMS Alert for Usage: Please enter phone number Send Test Message

Note: This function may cause SMS charges.

Monthly Data Statistics: ☒

Start Date: 1

Save

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32. The Accused Products are capable of establishing a maximum drain rate that represents the maximum number of credits that can be drained from said credit bucket in a single time-slice.

33. The Accused Products are capable of setting said refresh rate, said maximum credit limit, and said maximum drain rate in registers of a hardware-based rate control engine.

34. The Accused Products are capable of enabling QoS to set bandwidth allocation.

35. Bandwidth allocated is the maximum bandwidth that can be used by the device. (i.e., maximum drain rate).

36. TP-Link instructs its users regarding bandwidth allocation as follows:

³ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-11-specify-your-network-settings#ug-sub-title-3

I want to:

Specify priority levels for some devices or applications.

For example, I have several devices that are connected to my wireless network. I would like to set an intermediate speed on the internet for my phone.

How can I do that?

1. Enable QoS and set bandwidth allocation.
- 1) Visit <http://tplinkmodem.net>, and log in with the password you set for the router.
- 2) Go to **Advanced** > **QoS** > **Settings**.
- 3) Select **Enable QoS**.
- 4) Input the maximum upload and download bandwidth provided by your Internet service provider. 1Mbps equals to 1000Kbps.
- 5) Click **Advanced** and drag the scroll bar to set the bandwidth priority percentage.
- 6) Click **Save**.

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37. For example, the Accused Products are capable of being configured for an upload bandwidth to 150 Mbps. When high priority is at 100%, with both medium priority and low priority are set at 0, the high priority device can drain up to a maximum of 150Mbps of bandwidth (i.e., Maximum drain limit).

38. TP-Link provides the following instruction regarding maximum drain rate from actual bandwidth for the Accused Products:

The screenshot shows the QoS configuration interface. At the top, 'QoS' is selected. Below it, 'QoS:' is followed by a checked 'Enable' checkbox. A note states: 'For the best internet performance, the upload and download bandwidth you set should NOT exceed your actual bandwidth. It is recommended to test your actual bandwidth first (for example, at www.speedtest.net)'. There are two input fields: 'Upload Bandwidth:' and 'Download Bandwidth:', both with '0' entered and 'Mbps' selected from a dropdown. Below these is an 'Advanced' section with three sliders: 'High Priority:' set to 60%, 'Middle Priority:' set to 30%, and 'Low Priority:' set to 10%. A 'Save' button is located at the bottom right of the form.

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⁴ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-1-get-to-know-about-your-4g-lte-router

⁵ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-5-bandwidth-control/#ug-sub-title-1

39. The Accused Products use QoS (Quality of Service) rules to specify prioritization of traffic (e.g., managing bandwidth) and setting up Total Data Limit, Total Bandwidth, and Standard Bandwidth Allocation. (i.e., setting said refresh rate, said maximum credit limit and said maximum drain rate).⁶

40. The Accused Products are capable of allowing credits to accumulate in a credit bucket over multiple time-slices up to a maximum of said maximum credit limit.

41. The Accused Products are capable of allocating credits from the credit bucket to packet traffic that is associated with said credit bucket.

42. The Accused Products are capable of limiting the maximum data (i.e., maximum credit limit) that can be used over a month or in total. The maximum data limit is divided into multiple parts over different times with the help of QoS settings.

43. TP-Link instructs its users to configure the Accused Products on how to spread the maximum credit limit:

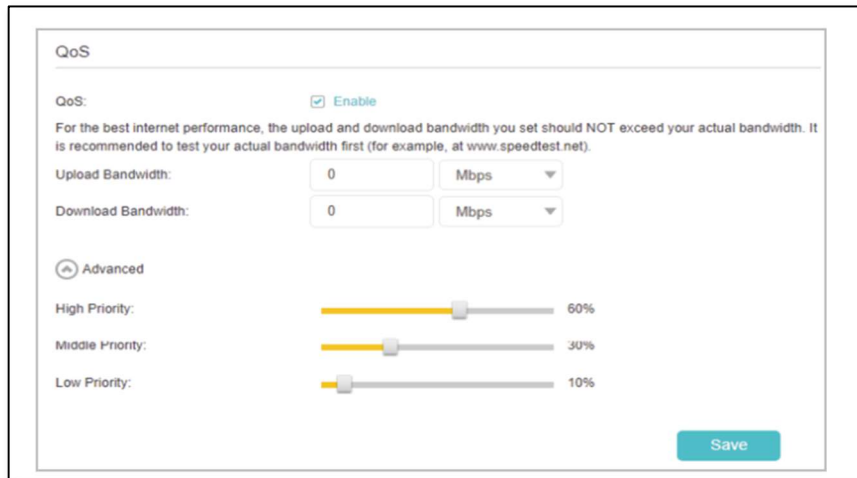
The screenshot displays the 'Data Settings' interface of a TP-Link router. At the top, it shows 'Monthly Used: 0.000 MB' with a 'Correct' button. Below this, there is a note about sending messages to the carrier for accurate data usage. The 'Data Limit' section features a toggle switch that is currently turned on, with a sub-note stating the router will disconnect when the limit is reached. The 'Monthly Allowance' section has an input field and a unit selector set to 'MB'. The 'Usage Alert' section has an input field set to '90 %'. The 'SMS Alert for Usage' section includes a text input for a phone number, a 'Send Test Message' button, and a note that this function may cause SMS charges. The 'Monthly Data Statistics' section has a toggle switch turned on and a 'Start Date' input field set to '1'. A 'Save' button is located at the bottom right of the settings area.

⁶ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-5-bandwidth-control

⁷ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-11-specify-your-network-settings#ug-sub-title-2

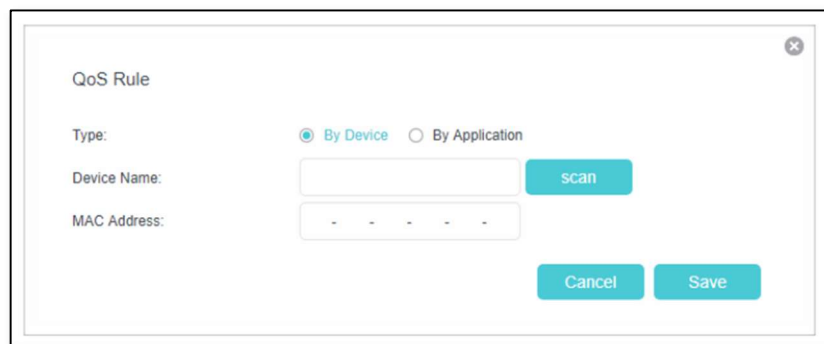
44. The Accused Products use bandwidth limit to limit the total bandwidth, and the total bandwidth is divided among different devices/applications (i.e., traffic class) as low, medium, and high priority ratio of bandwidth.

45. TP-Link instructs its users to enable QoS to limit overall bandwidth as follows:



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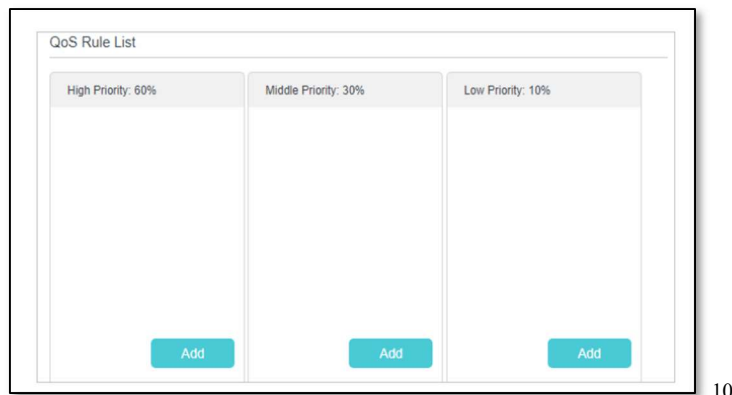
46. For example, the Accused Products are capable of allowing a user to select a specific device/application (i.e., traffic class) to be associate with a bandwidth allocation as low/medium/high priority (i.e., allocation of credits). TP-Link instructs its users as follows:



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⁸ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-5-bandwidth-control#ug-sub-title-1

⁹ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-5-bandwidth-control#ug-sub-title-1



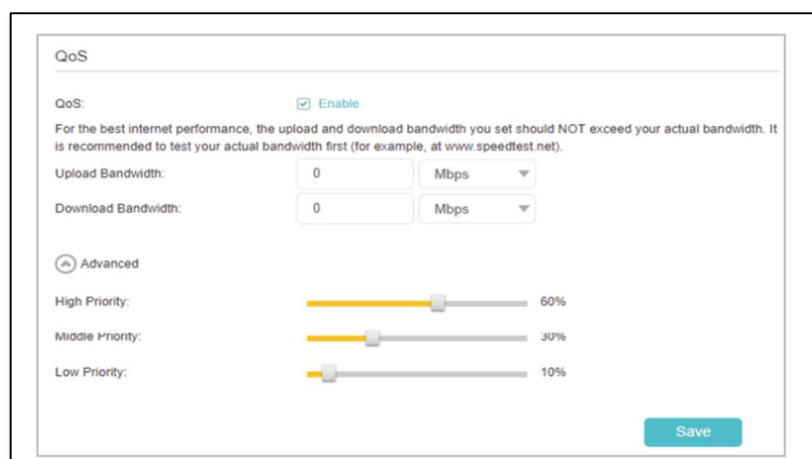
10

47. The Accused Products are capable of restricting the allocation of credits from said credit bucket in any single time-slice to the maximum drain rate.

48. The Accused Products are capable of characterizing the flow of packet traffic that is associated with said credit bucket and changing the maximum credit limit and the maximum drain rate as a set in response to said characterization.

49. The Accused Products are capable of setting a bandwidth allocation limit for different priorities. (i.e., restricting the allocation of credits from said credit bucket in any single time-slice to the maximum drain rate).

50. TP-Link instructs its users regarding allocation of credits as follows:



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¹⁰ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-5-bandwidth-control#ug-sub-title-1

¹¹ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-5-bandwidth-control#ug-sub-title-1

51. The Accused Products are capable of providing various options to users to change the bandwidth priority percentage. TP-Link instructs its users to “Click Advanced and drag the scroll bar to set the bandwidth priority percentage.”¹²

52. The Accused Products provide an option to change the total bandwidth limit associated. TP-Link instructs its users regarding changing the maximum credit limit as follows:

The screenshot displays the 'Data Settings' interface for a TP-Link Archer MR400 router. At the top, it shows 'Monthly Used: 0.000 MB' with a 'Correct' button. Below this, a message states: 'You can send messages to your carrier for accurate data usage.' The 'Data Limit' section features a toggle switch that is currently turned on, with a note: 'The router will automatically disconnect from the network when the data usage limit is reached.' The 'Monthly Allowance' section has an input field and a unit dropdown menu set to 'MB'. The 'Usage Alert' section has an input field set to '90 %'. The 'SMS Alert for Usage' section includes a text input field with the placeholder 'Please enter phone number' and a 'Send Test Message' button, accompanied by a red note: 'Note: This function may cause SMS charges.' The 'Monthly Data Statistics' section has a toggle switch that is turned on. The 'Start Date' section has an input field set to '1'. A 'Save' button is located at the bottom right of the settings area.

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53. TP-Link has received notice and actual or constructive knowledge of its infringement of the '988 Patent no later than the date of service of this Complaint.

54. Since at least the date of service of this Complaint, through its actions, TP-Link has actively induced product makers, distributors, retailers, and/or end users of the Accused Products to infringe the '988 Patent throughout the United States, including within this Judicial District, by, among other things, advertising and promoting the use of the Accused Products in various websites, including providing and disseminating product descriptions, operating manuals, and other instructions on how to implement and configure the Accused Products. Examples of such

¹² https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-5-bandwidth-control#ug-sub-title-1

¹³ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-11-specify-your-network-settings#ug-sub-title-2

advertising, promoting, and/or instructing include web advertising,¹⁴ user guides,¹⁵ and support forum postings.¹⁶

55. TP-Link was and is aware that the normal and customary use by end users of the Accused Products infringes the '988 Patent. TP-Link's inducement is ongoing.

56. Brazos has suffered damages as a result of TP-Link's direct and indirect infringement of the '988 Patent in an amount adequate to compensate for TP-Link's infringement, but in no event less than a reasonable royalty for the use made of the invention by TP-Link, together with interest and costs as fixed by the Court.

57. Defendant continued to make, use, sell and/or import Infringing Products, to induce others to engage in such conduct, and/or to contribute to others engaging in such conduct despite knowing that its actions constituted infringement of a valid patent.

58. Accordingly, Defendant acted egregiously and/or knowingly or intentionally when it infringed the '988 Patent.

IV. JURY DEMAND

59. Plaintiff Brazos hereby demands a jury on all issues so triable.

V. REQUEST FOR RELIEF

WHEREFORE, Plaintiff Brazos respectfully requests that the Court:

(a) enter judgment that TP-Link infringes one or more claims of the '988 Patent literally and/or under the doctrine of equivalents;

(b) enter judgment that TP-Link has induced infringement and continues to induce infringement of one or more claims of the '988 Patent;

¹⁴ <https://www.tp-link.com/en/home-networking/3g-4g-router/archer-mr400/>

¹⁵ https://www.tp-link.com/us/user-guides/Archer-MR400_V3/chapter-1-get-to-know-about-your-4g-lte-router#ug-sub-title-1

¹⁶ <https://www.tp-link.com/dk/support/faq/1658/>; <https://www.tp-link.com/dk/support/faq/2488/>

(c) enter judgment that TP-Link has contributed to and continues to contribute to the infringement of one or more claims of the '988 Patent;

(d) award Brazos damages, to be paid by TP-Link in an amount adequate to compensate Brazos for such damages, together with pre-judgment and post-judgment interest for the infringement by TP-Link of the '988 Patent through the date such judgment is entered in accordance with 35 U.S.C. § 284, and increase such award by up to three times the amount found or assessed in accordance with 35 U.S.C. § 284;

(e) declare this case exceptional pursuant to 35 U.S.C. § 285; and

(f) award Brazos its costs, disbursements, attorneys' fees, and such further and additional relief as is deemed appropriate by this Court.

Dated: October 31, 2020

Respectfully submitted,

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